

Work Order ID 136886

Wednesday, September 16, 2015 1:36:28 PM



136886

RUSH

Page 1

Item ID: D3537-3 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Wearpad
 Start Date: 9/21/2015 Start Qty: 20.00 *20* Cust Item ID:
 Required Date: 9/30/2015 Req'd Qty: 20.00 *20* Customer:
 Reference:

Approvals: Process Plan: ML5 Date: SEP 16 2015 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start *NR1*
 Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3537	D								

100 FLOW WATER JET 0.00
 100
 Waterjet Memo 0.01
 FLOW CNC Waterjet 1-Cut D3537-3 as per Dwg D3537

Dwg Rev: D

Prog Rev: D

2-Deburr if necessary

110 QC2- Inspect parts off machine FAI/FAIB 0.00
 110
 QC Memo 0.00
 Quality Control

(24)

09/15/09/08

(24)

09/15/09/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water-Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water-Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																														
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 136886

136886

Page 3

Wednesday, September 16, 2015 1:36:28 PM

Item ID: D3537-3 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearpad
 Start Date: 9/21/2015 Start Qty: 20.00 ***20*** Cust Item ID:
 Required Date: 9/30/2015 Req'd Qty: 20.00 ***20*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150	Weld per dwg A/R Hardcoat S.S. Batch: _____ Large Fab	0.00							
-----	--	------	--	--	--	--	--	--	--

150

Large Fab Memo 0.05

Large Fab A/R 2059B Hardcoat BATCH: M1330 97
Sodel 8259.

23 EL 15-9-28

160	QC10- Inspect visual per QSI004- ground welds	0.00							
-----	---	------	--	--	--	--	--	--	--

160

QC Memo 0.00

Quality Control

23 15-09-29 DAS 9 9-89 SEP 29 2015

P.T.O.

170	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

170

QC Memo 0.01

Quality Control

23 15-09-29 DAS 9 9-89 SEP 29 2015

DQA:

Date:

15/10/15



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

15/10/13

Work Order update only ☐

Work Order: <u>136886</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No. <u>D3537-1</u>		Rework ☐		Skid-tube ☐		Cross tube ☐		Water Jet ☐		Engineering ☒	
NCR No. <u>15-5403</u>		Scrap ☐		Machining ☐		Small Fab ☐		Prod. Eng. Coord. ☐		Quality ☐	
		Use-as-is ☐		Thermoforming ☐		Finishing ☐		Rec/Store/Packaging ☐		Other ☒	
		Suspected Unapproved ☒		Large Fab ☒		Composite ☐		Supplier ☐		MAUFACT ☒	
Date: <u>15-09-23</u>		Step #: <u>150</u>		QTY Effective: <u>24</u>				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By			
D3537-1 was welded using the robot using Sadel 8259.				Acceptable deviation per D.S. email				EL / 15-9-29			
R.C process not approved								Lead hand / Supervisor Approval Verification			
								DAS 9 9-89 15-09-29			
								QC / QA Coordinator Approval			
								5/15/09/29.			
Root Cause				FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐						
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐						
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐						
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	☒ Weld	Part Incorrect ☐						
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Past Expiry Date ☐	Manufacturing Process ☐										
Misidentified ☐	Past Due ☐	OTHER: ☐									

Work Order ID 136886

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Page 4

Wednesday, September 16, 2015 1:36:28 PM

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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Identify as per dwg & Stock Location: <u>FP-001</u>	0.00							
200									
Packaging	Memo	0.00							
Packaging	LOCATION : FP001								
210	QC21- Final Inspection - Work Order Release	0.00							
210									
QC	Memo	0.03							
Quality Control									

X23 / 13/09/25

MCS SEP 29 2015

POSITIVE RECALL
 EFFECTIVE 15/9/29 AUTH UP
 RELEASED UP DATE 15/9/29
 NEED D.S. APPROVAL

3# 20150929

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Picklist Print

Wednesday, September 16, 2015 1:36:31 PM

Page 1

Work Order ID: 136886

136886

Parent Item: D3537-3

D3537-3

Parent Item Name: Wearpad

Start Date: 9/21/2015

Required Date: 9/30/2015

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP Rev:A New Issue 07-02-14 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased		No		100	sf	252.8900	0.149	3.136842			

M304S16GA

304/316 Sheet .063

09/15/09/28

Location

Loc Qty

Loc Code

MAT019

252.89

m131384

19.9

m131503

7.79

m132797

64

m132835

161.2

(4)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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DART AEROSPACE LTD		Work Order:	136886
Description: Wearpad		Part Number:	D3537-3
Inspection Dwg: D3537	Rev: <i>8</i> <i>DCR</i>	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.859	+/-0.010	5.865	/			
3.500	+/-0.010	3.500	/			
1.965	+/-0.010	1.968	/			
2.795	+/-0.010	2.794	/			
3.625	+/-0.010	3.624	/			
0.220 x 0.380	+/-0.010	0.221 x 0.381	/			

Measured by:	<i>DC</i>	Audited by:	<i>38</i> 9-89	Prototype Approval:	N/A
Date:	15/09/08	Date:	SEP 28 2015	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.05.10	New Issue	KJ/JLM <i>A</i>	<i>B</i>

DQA: _____ Date: _____

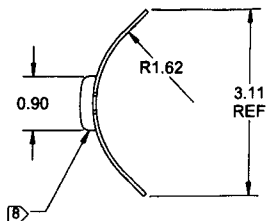


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

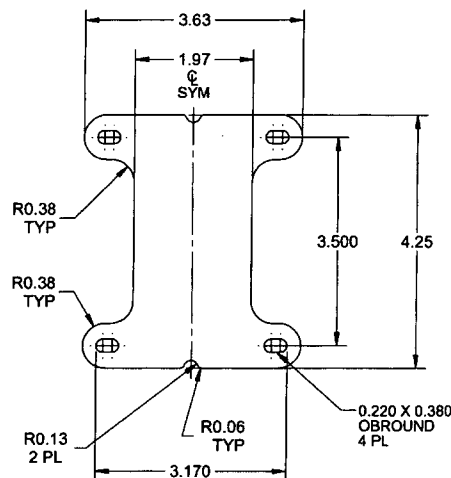
Work Order update only ☐

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D3537-1 WEARPAD
(MAKE FROM D3537-1F)

0.25
TYP

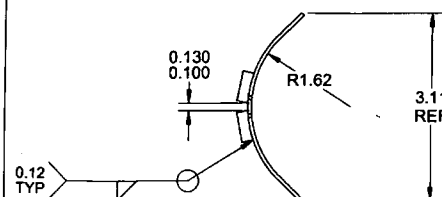


D3537-1F FLAT PATTERN

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 16 GAUGE (0.063) PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 PER DART SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-1" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.42 lbs
- 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
- 9) WELDING: PER QSI 004

SHOW COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
136886
ML5
1509-16

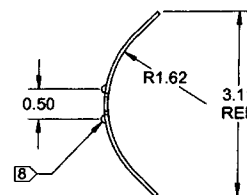


D3537-5 WEARPAD
(MAKE FROM D3537-1F)

0.63 TYP

NOTES:

- 1-5) AS PER D3537-1
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-5" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.42 lbs
- 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
- 9) WELDING: PER QSI 004



D3537-9 WEARPAD
(MAKE FROM D3537-1F)

0.25 TYP

NOTES:

- 1-5) AS PER D3537-1
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-9" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.19 lbs
- 8) APPLY 2059B HARDCOAT WELD BEAD, 0.06 TO 0.13 THICK ON BOTTOM SURFACE, AFTER FORMING
- 9) WELDING: PER QSI 004
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.02-0.04 THICK, PER DART QSI 005 4.9

D	RE-FORMAT DRAWING, ADD -9/-11 WEARPADS	DB	14.10.16
C	WIDEN TAB TO 0.380, WELD PATTERN	CB	07.04.13
B	ADD AMS 5513 AND AMS 5524	CB	07.03.20
A	NEW ISSUE	CB	06.11.06
REV.	DESCRIPTION	BY	DATE

APPROVED

DESIGN	CB	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DB		
CHECKED	DW	DRAWING NO.	REV. D
MFG. APPR.	DD	D3537	SHEET 1 OF 2
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WEARPAD	NTS
DATE	14.10.16	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2014-11-05

DQA: _____ Date: _____



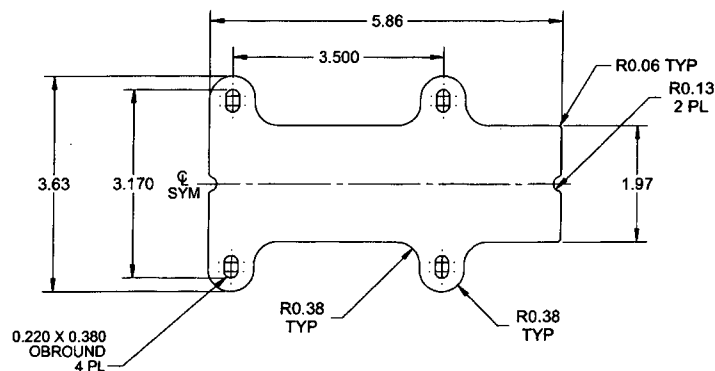
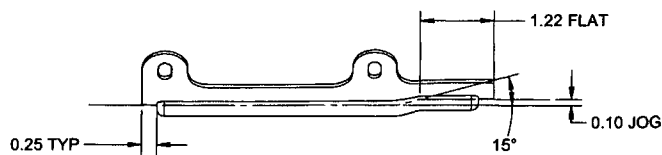
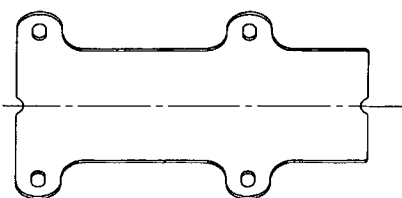
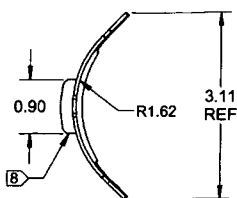
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

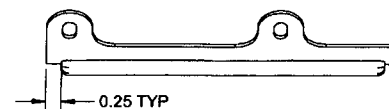
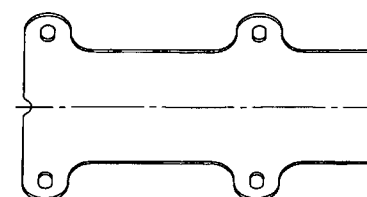
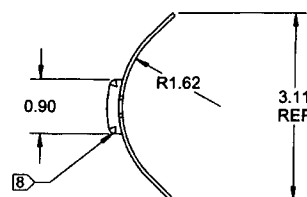
D3537-3 WEARPAD
(MAKE FROM D3537-3F)



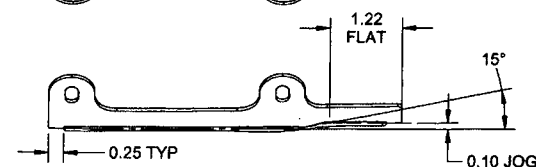
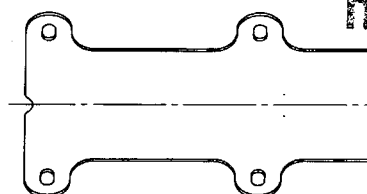
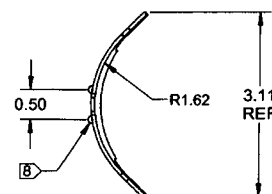
D3537-3F FLAT PATTERN

- NOTES:**
- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 16 GAUGE (0.063) PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 PER DART SPEC M304S16GA
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-3" PER QSI 044 6.1 (PERMANENT MARKER)
 - 7) WEIGHT: 0.50 lbs
 - 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
 - 9) WELDING: PER QSI 004

D3537-7 WEARPAD
(MAKE FROM D3537-3F)



- NOTES:**
- 1-5) AS PER D3537-3
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-7" PER QSI 044 6.1 (PERMANENT MARKER)
 - 7) WEIGHT: 0.50 lbs
 - 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
 - 9) WELDING: PER QSI 004



- NOTES:**
- 1-5) AS PER D3537-3
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-11" PER QSI 044 6.1 (PERMANENT MARKER)
 - 7) WEIGHT: 0.25 lbs
 - 8) APPLY 2059B HARDCOAT WELD BEAD, 0.06 TO 0.13 THICK ON BOTTOM SURFACE, AFTER FORMING
 - 9) WELDING: PER QSI 004
 - 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.02-0.04 THICK, PER DART QSI 005 4.9

APPROVED

DESIGN	DB
DRAWN	DB
CHECKED	DW
MFG. APPR.	DD
APPROVED	MP
DE APPR.	DS
DATE	14.10.16

DART AEROSPACE USA, INC.
KENT, WA

DRAWING NO. **D3537** REV. D
SHEET 2 OF 2
TITLE **WEARPAD** SCALE NTS

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RELEASED
2014-11-05

DQA: _____ Date: _____

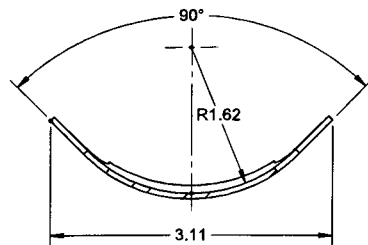


WORK ORDER NON-CONFORMANCE / UPDATE

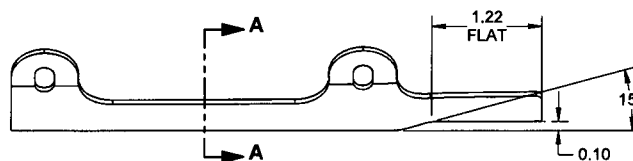
QA Closed: _____ Date: _____

Work Order update only ☐

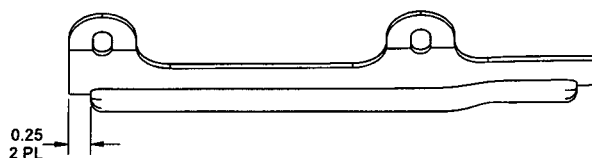
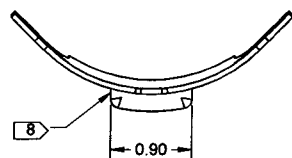
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								



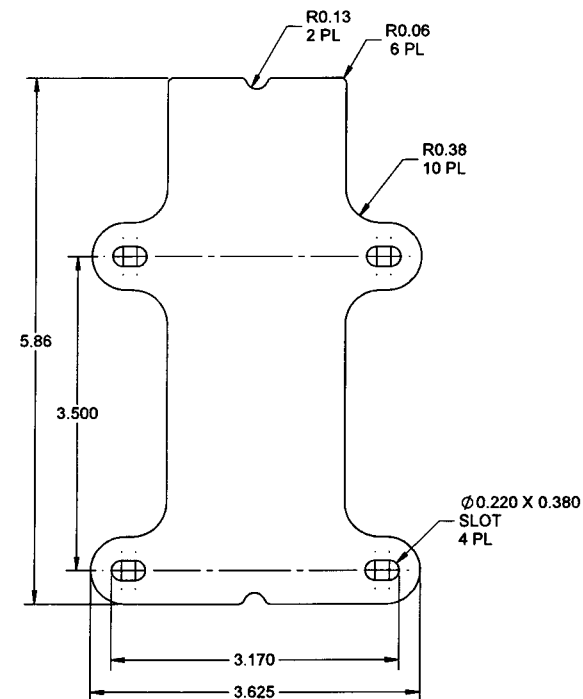
SECTION A-A



D3537-3 WEARPAD
(BENDING DETAIL)
(MAKE FROM D3537-3F)



D3537-3 WEARPAD
(WELDMENT)



D3537-3F WEARPAD
(FLAT PATTERN)

PRELIMINARY ISSUE

15/3/27

NOTES:

- 1) MATERIAL: -3: MAKE FROM -3F
-3F: AISI 304/316 SS SHEET ANNEALED, 16 GAUGE (0.063) PER MIL-S-5059 OR AMS 5513 (304)
OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 PER DART SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.50 lbs
- 8) BUILDUP HARD SURFACING 0.17 - 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR
BUILDUP HARD SURFACING 0.19 - 0.25 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)



PRELIMINARY ISSUE

DESIGN	CB	DART AEROSPACE USA, INC.	
DRAWN	AJS	KENT, WA	
CHECKED	CP	DRAWING NO.	REV. XX
MFG. APPR.	DD	D3537	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		WEARPAD	NTS
DATE	15.09.28	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Chris Provencal

From: David Shepherd
Sent: Tuesday, September 29, 2015 12:21 PM
To: Alain Pelletier; Patrick Smith
Cc: William Monterroza; Nigel Forbes; Mario Poulin; Patrick Smith; Chris Provencal
Subject: RE: Weld Robot Wearplates D3537

Alain,

As discussed, I think it is relatively low risk to release these wearplates that have been welded by the robot in advance of the QSI approval, the substantiation report approval, and the drawing approval. I am OK with Chris/Alex signing this off as a deviation. Like you, I am frustrated by what happened here and I am glad to see that you are going to get to the bottom of it. I received the updated version of QSI 004 yesterday, but would appreciate if people could start planning on giving me a week to review documents like this. As you know, things are exceptionally busy at Eagle right now with all the flight testing we are doing on the 407HP.

Regards,
David

From: Alain Pelletier
Sent: September-29-15 8:19 AM
To: Patrick Smith <psmith@dartaero.com>
Cc: William Monterroza <wmonterroza@dartaero.com>; David Shepherd <dshepherd@dartaero.com>; Nigel Forbes <nforbes@dartaero.com>; Mario Poulin <mpoulin@dartaero.com>; Patrick Smith <psmith@dartaero.com>; Chris Provencal <cprovencal@dartaero.com>
Subject: RE: Weld Robot Wearplates D3537

Hello Pat,

Hopefully, we can make these shipments without taking risk based on PRELIM D3537 drawing (short term solution / reactive) and be on time for these deliveries.

Trying to avoid that situation in the future, can you please set-up a meeting this week to understand the "root cause" of that "mess" this morning ? Do we have a process in place ? Why we have not followed this process ? Etc...

I believe there's an opportunity here to clear out the process when we have some changes needed to our drawings as we have now. LESSONS LEARNED EXERCISE !!!

Thanks.

Alain